

## REMARKS

Claims 7-21 are pending in the application. Claims 1-6 were previously canceled. By this amendment, claim 15 has been amended, no new claims have been added, and no claims have been cancelled.

As an initial comment, the Examiner has commented that applicant did not filed a certified copy of the 092215410 application as required by 35 U.S.C. § 119(b). However, the prosecution history indicates that this document was filed April 4, 2005. Under 37 CFR 1.55(a)(2), the Director has merely required that a certified copy of the foreign application to be submitted before the patent is granted. See MPEP § 201.14. Therefore, this requirement is believed satisfied.

### **Rejection of Claims 7-21 under 35 U.S.C. § 102**

Claims 7-21 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. US2003/0210662 filed by Rensberger et al. In the sections cited in the Office Action, Rensberger et al. describes a Data Difference Modulation ("DDM") scheme which includes four symbols, expressed as the time difference between state transitions. (Page 1, paragraph 5). A state transition occurs when the signal level changes from "1" to "0" and vice versa. *Id.* "The basic time unit is denoted with T and represents the shortest symbol duration. The time lengths of each symbol are fractional multiples of this basic unit of time." *Id.*

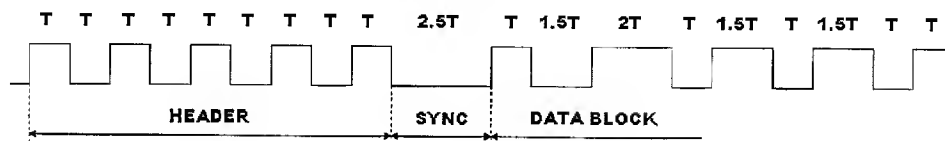


Figure 2

As illustrated in Figure 2 (reproduced above), data packets generally start with a header that may consist of "a given number of T pulses ... followed by a SYNC pulse and then the actual ("payload") data." (Page 1, paragraph 17). The data block includes an ID code, which is "a unique address associated with the transmitter and the receiver paired together." (Page 2, paragraph 20 and 22). "When several wireless data input devices are collocated and share the same RF channel, one receiver can receive the "desired" signal (the signal coming from the paired transmitter) but also

"perturbations" (signals coming from other collocated transmitters)." (Page 2, paragraph 21). "When a packet is received, the receiver will check packet's ID and decide whether the packet is a perturbation or desired signal." *Id.*, emphasis added.

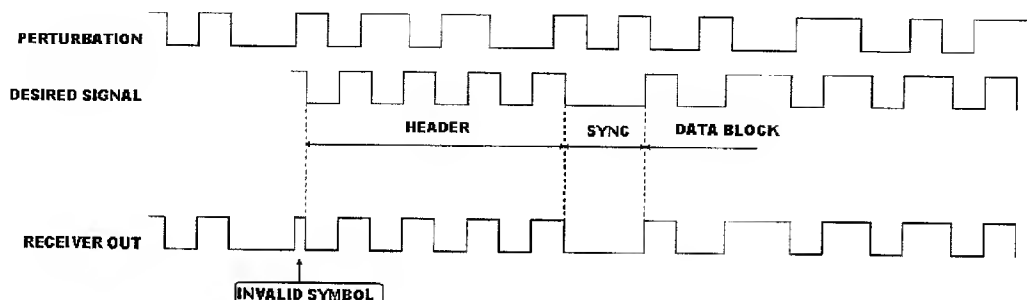


Figure 4

In Figure 4 (reproduced above), initially, the desired transmitter is OFF and the perturbation transmitter is ON. (Page 3, paragraph 37). In this example, the receiver starts out decoding a perturbation signal. (Page 3, paragraph 37). "These packets are sent with a different ID, so no action is actually taken by the receiver; nonetheless, it listens to and decodes the packets." *Id.* When the desired signal starts, the relative timing of the perturbation and desired signals is such that an invalid symbol (shorter than  $0.75T$ ) is generated at the receiver output. *Id.* This causes the receiver to abort processing the current packet, and return to the waiting state (reinitialize). *Id.* The receiver can process and decode the first packet in the desired transmission, "so long as sufficient header pulses of the desired signal are received following the reinitialization." *Id.*, emphasis added.

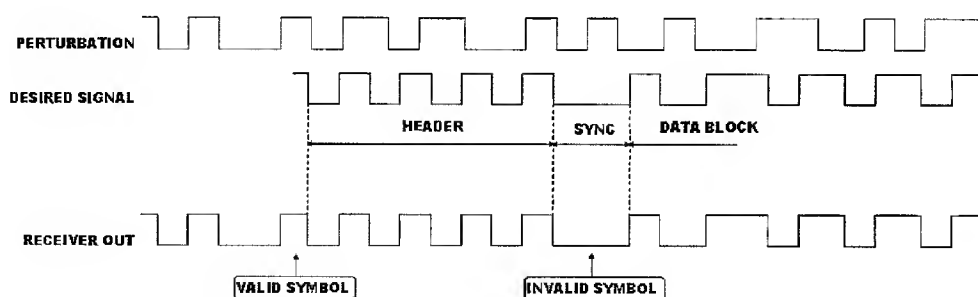


Figure 5

On the other hand, in a similar example depicted in Figure 5 (reproduced above), the relative timing of the perturbation and desired signals is such that an invalid symbol is not generated before the sufficient number of header pulses. (Page 3,

paragraph 38). In this example, “[t]he first packet in the desired transmission is lost in this case, since reinitialization has occurred after the header of the desired signal has already passed.” *Id.*

Rensberger et al. teaches a method of avoiding the loss of the first packet by including an invalid symbol (e.g., a 3T pulse) in the header that causes the receiver to reinitialize. (Page 3, paragraphs 60-62). A sufficient number of pulses (e.g., 5-6 pulses) follow the invalid symbol, allowing the receiver to “recognize the packet of the desired transmission without difficulty.” (Page 3, paragraph 62). Thus, the first packet is not lost. However, as explained above, the ID code included in the data block is used to identify whether the signal is the desired signal or perturbation signal, not the invalid symbol in the header. Further, Rensberger et al. does not discuss using different invalid symbols for different wireless devices. Because the invalid symbol merely reinitializes the receiver, there is no need to use different invalid symbols for different devices. The ID code in the data block is used to differentiate transmitting devices, not the invalid symbol.

Independent claim 7 recites a system comprising “a first wireless transmitting unit configured to transmit a first signal comprising a leading portion and a data portion different from the leading portion, the leading portion comprising a first waveform signal having a first wavelength.” The system also includes “a second wireless transmitting unit configured to transmit a second signal comprising a leading portion and a data portion different from the leading portion, the leading portion comprising a second waveform signal having a second wavelength different from the first wavelength.” (emphasis added). A wireless receiving unit in claim 7 is “configured to receive the first signal and the second signal and determine the first signal was transmitted by the first wireless transmitting unit based on the first wavelength and the second signal was transmitted by the second wireless transmitting unit based on the second wavelength.” (emphasis added). As explained above, Rensberger et al. does not teach or suggest using different invalid symbols in the packet header for different wireless devices. Further, because the ID code in the data block is used to differentiate transmitting devices, there is no need in Rensberger et al. to use different invalid

symbols. For at least these reasons, Rensberger et al. fails to anticipate or render obvious the invention of claim 7 and claims 8-14 that depend from claim 7.

Amended independent claim 15 recites a system comprising “a first wireless transmitting unit comprising means for generating a first signal comprising a leading portion and a data portion different from the leading portion, the leading portion comprising a first waveform signal having a first wavelength.” The system also includes “a second wireless transmitting unit means for generating a second signal comprising a leading portion and a data portion different from the leading portion, the leading portion comprising a second waveform signal having a second wavelength different from the first wavelength.” (emphasis added). The system also includes “a wireless receiving unit comprising means for receiving the first signal and the second signal and means for determining the first signal was transmitted by the first wireless transmitting unit and the second signal was transmitted by the second wireless transmitting unit based on the first and second wavelengths.” (emphasis added). As explained above, these elements are neither taught nor suggested by Rensberger et al. Thus, Rensberger et al. fails to anticipate or render obvious the invention of claim 15.

Independent claim 16 recites a wireless receiving unit comprising “an electronic circuit configured to distinguish the signals received from one another based on differences in the wavelengths of the waveform signals of the leading portions of the received signals.” (emphasis added). As explained above, these elements are neither taught nor suggested by Rensberger et al. Thus, Rensberger et al. fails to anticipate or render obvious the invention of claim 16 and claims 17 and 18 that depend from claim 16.

Independent claim 19 recites a method comprising “receiving a first signal lacking a device identifier from a first wireless transmitting unit, the first signal having a leading portion preceding a data portion, the leading portion having a waveform signal with a first wavelength.” (emphasis added). The method also includes “receiving a second signal lacking a device identifier from a second wireless transmitting unit, the second signal having a leading portion preceding a data portion, the leading portion having a waveform signal with a second wavelength.” (emphasis added). Further, the method includes “determining the first signal was transmitted by the first wireless

transmitting unit and the second signal was transmitted by the second wireless transmitting unit based on the first and second wavelengths." (emphasis added). As explained above, the desired signal in Rensberger et al. includes an ID code in the data block. Further, Rensberger et al. does not teach or suggest determining the first signal was transmitted by the first wireless transmitting unit and the second signal was transmitted by the second wireless transmitting unit based on the first and second wavelengths. Thus, Rensberger et al. fails to anticipate or render obvious the invention of claim 19 and claims 20 and 21 that depend from claim 19.

No fees are deemed due. If additional fees are believed necessary, the Commissioner is authorized to charge any deficiency or credit any overpayment to Deposit Account No. 04-0258 of Davis Wright Tremaine LLP.

All of the claims remaining in the application are now believed to be allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

If questions remain regarding this application, the Examiner is invited to contact the undersigned at (206) 757-8021.

Respectfully submitted,  
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